Jody Holthaus, Agent
Meadowlark Extension District
Livestock and Natural Resources

Ag Days 2017 Wrapped

David Hallauer and I have just finished the Ag Day circuit for our District. We've seen 650 kids in the last 6 days! It's great to interact with them, they are always so positive. I have learned they seem to have a problem when you ask "are there any questions?" You can either get a story about something that may or may not have anything to do with the current subject or you can get a question like "where do you find platypuses? One thing this week does every year, is to reinforce that I'm extremely grateful for the people that have made educating our youth their fulltime careers! Thank you to all the teachers and their paras.

My topic at the Ag day was Water. It's great that the kids are so aware of where their water comes from. Water is a precious resource and maybe even more so in their lifetimes. We also talk about all the stuff that's in the lake, algae. Just so happens there is a television ad right now that talks about growing algae as a renewable energy source. Wouldn't that be great if we could all become "algae farmers" and grow our own fuel!

Algal fuel, algal biofuel or algal oil is an alternative to liquid fossil fuels. It is estimated that this type of biofuel is probably at least 25 years away from commercial availability. Algae were first explored as a fuel alternative in 1978 under President Jimmy Carter. Gas prices had skyrocketed, lines at the pump were endless, and the government was looking to help ease the crisis. The Aquatic Species Program run by the National Renewable Energy Laboratory, researched high oil-output algae for biofuel. After testing more than 3,000 types of algae, the program concluded that the high-yielding plant, if produced in large enough amounts, could replace fossil fuels for home heating and transportation purposes.

More than 100,000 different species of plantlike organisms belong the algae family. They come in various forms and colors, from tiny protozoa floating in ponds to huge bunches of seaweed inhabiting the ocean. Leafy kelp, grassy moss and fungus growing on rocks are all forms of algae. You may even see algae in different colors such as red, green and brown. Algae are easy to grow and can be manipulated to produce huge amounts without disturbing any natural habitats or food sources. Algae are easy to please -- all they need are water, sunlight and carbon dioxide. So, are algae all the same? Various algae contain different levels of oil. Of all the algae out there, pond scum -- algae that sit on top of ponds -- is best suited for biodiesel.

Algae production has the potential to outperform other potential biodiesel products such as palm or corn. For example, a 100-acre algae biodiesel plant could potentially produce 10 million gallons of biodiesel in a single year. Experts estimate it will take 140 billion gallons of algae biodiesel to replace petroleum-based products each year. To reach this goal, algae biodiesel companies will only need about 95 million acres of land to build biodiesel plants, compared to billions of acres for other biodiesel products. Since algae can be grown anywhere indoors, it's a promising element in the race to produce a new fuel.

Extracting oil from algae may seem like a grimy job, who knows what exciting careers these kids could have!